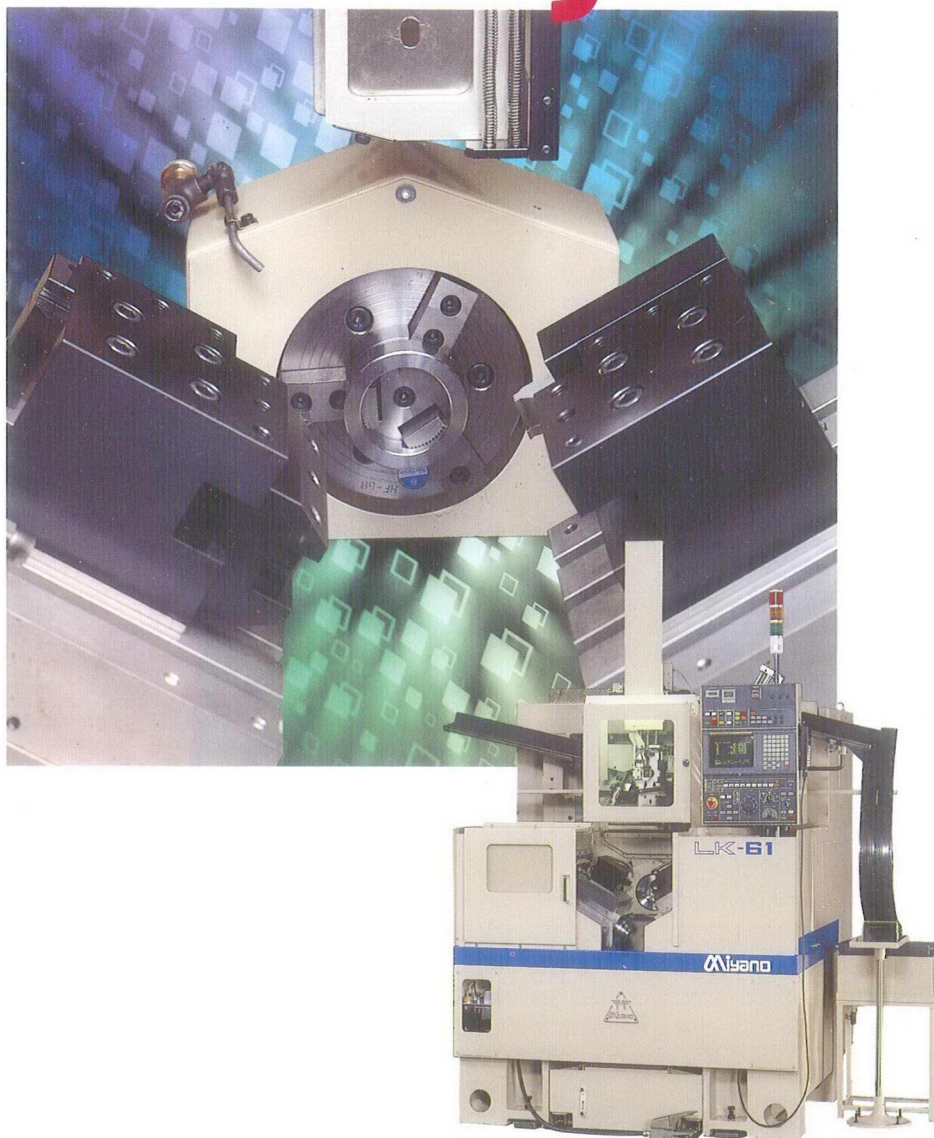


# **Exhibit 65**



# SUPER HIGH-PRODUCTION TWIN-TOOLING NC LATHE

# LK-61,81



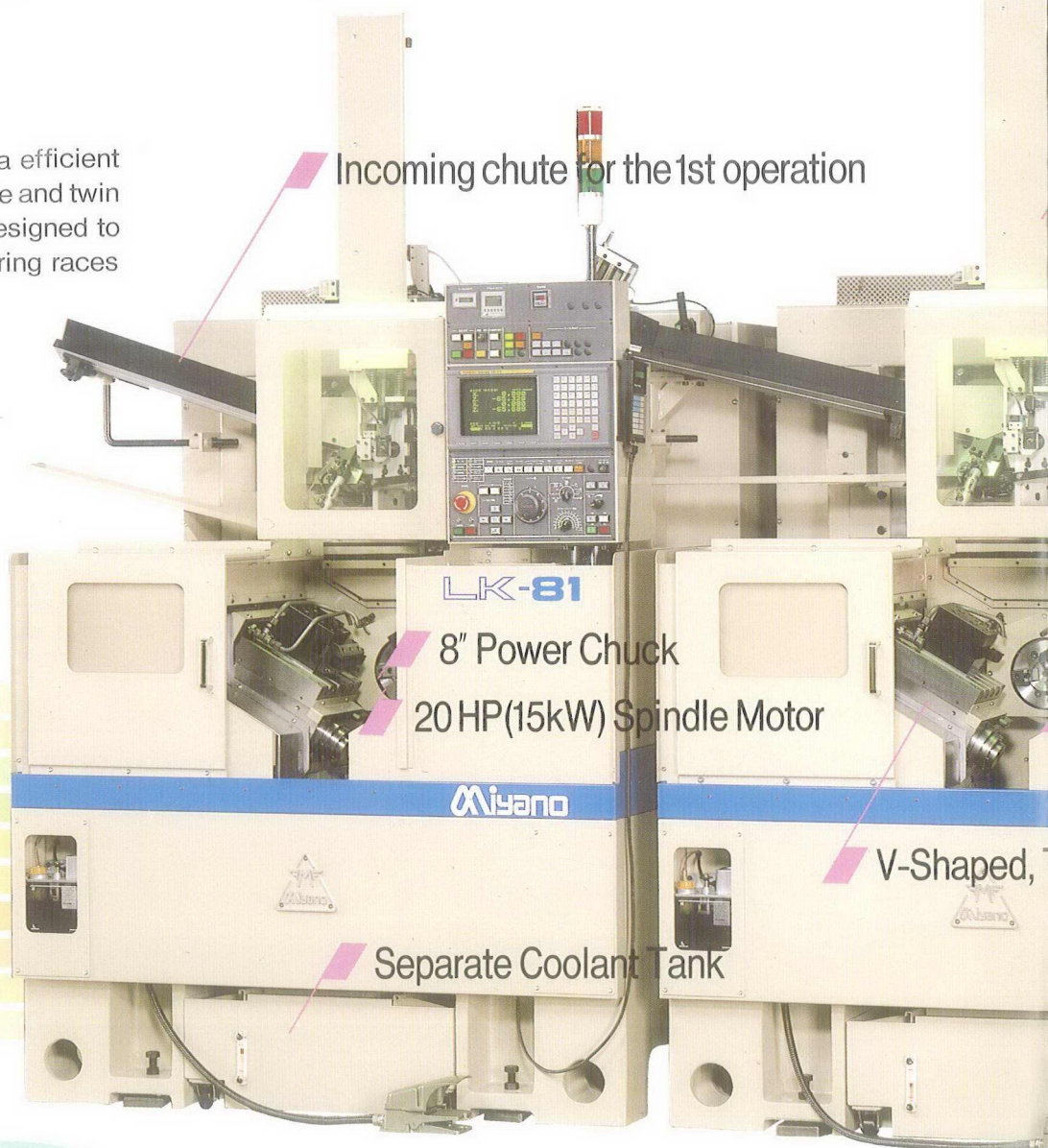
# HEAVY DUTY CNC LATHE



# SUPER FAST TURNING

Miyano's models LK-61/81 are ultra efficient turning machines with single spindle and twin tool slides, which were primarily designed to perform high speed turning of bearing races and flanged parts.

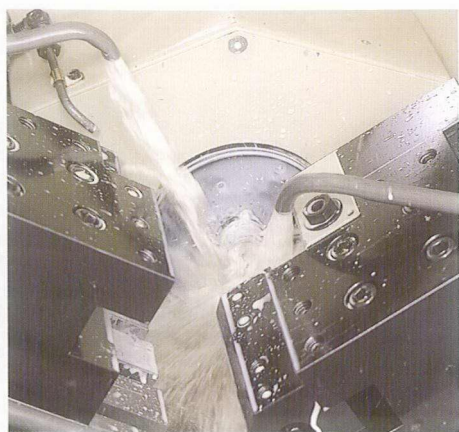
Loading cycle time was drastically reduced by the nonstop loading system. Powerful plunge cutting, with extremely fast material removal rate, drastically reduces cutting cycle time. The reduced loading and cutting cycle time makes the LK series machines fastest in their class.



First Operation

Second Operation

## 1st. Powerful Plunge Cutting Reduced Cutting Cycle.



High rigidity, high precision twin tool slides and a large diameter, quill type main spindle offer simultaneous high power plunge-cutting with formed tools (cutting sectional area: 6mm<sup>2</sup> wide), providing 35 cubic inches per minute of metal removal rate; cutting cycle is

drastically reduced. These turning components are also capable of high precision turning of hard material. Post turning process, such as grinding, can be eliminated.





# G SYSTEM

Nonstop, High Speed Loader

Outgoing chute for the 2nd operation



LK-61

6" Power Chuck

15 HP (11kW) Spindle Motor

Miyano

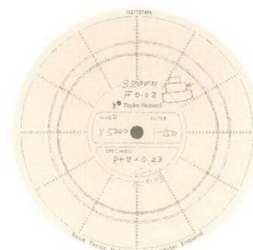
Twin NC Slides

## Stability supports precision cutting.

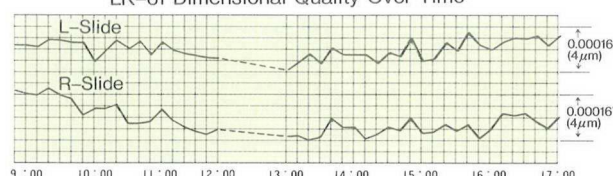
Miyano's original, wing-type high precision spindle quill and high rigidity, high precision NC slides hold excellent dimensional quality and roundness, providing stable machining.

### Cutting Condition

material : C36000 (B16-85)/ASTM  
spindle speed : 2,000 RPM {min-1}  
cutting feed : 0.0024" (0.06mm)/rev.  
tool : Compax R0.4mm  
coolant : non  
warm-up time : non  
sampling : 9:00-11:40 50 pieces  
                  11:40- 1pc./10 min.

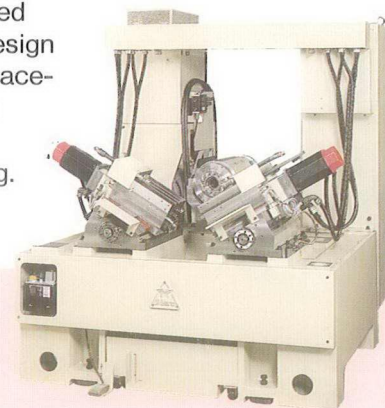


LK-61 Dimensional Quality Over Time

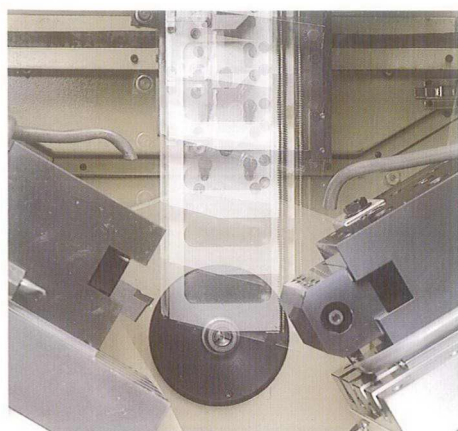


## Rigid bed supports efficiency.

Mono-cast machine bed features symmetrical design to minimize heat displacement and vibration, to ensure stable heavy cutting and hard turning.

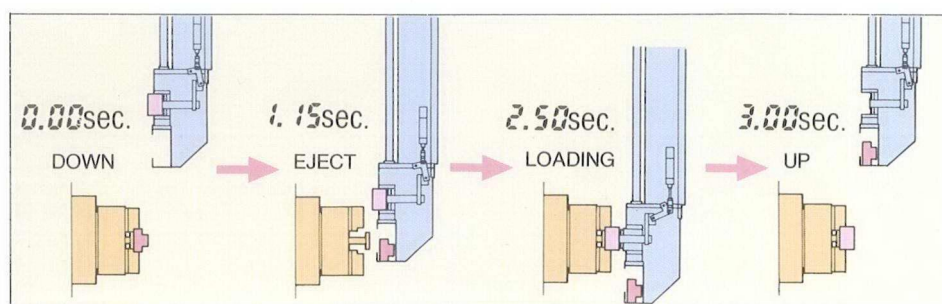


## 2nd. Ultra-Fast Loading Reduced Loading Cycle.



A nonstop, high speed NC loader can load and unload in only 3 seconds. Because it loads and unloads without stopping

the spindle, the time required for spindle acceleration and deceleration is reduced.





## MACHINE SPECIFICATIONS

Items			LK-61	LK-81
Machining Capacity	Power Chuck Size		6" Power Chuck	8" Power Chuck
	Max. Turning Dia.	Power Chuck	7-7/8" (200mm)	7-7/8" (200mm)
		Collet Chuck	3-1/8" (80mm) D-type collet	—
Main Spindle	Max. Turning Length		4-11/16" (120mm)	5-7/8" (150mm)
	Spindle Nose Dia.		5.512" (140mm) Flat	6.693" (170mm) Flat
	Id. of Spindle Through Hole		1.811" (46mm)	1.811" (46mm)
	Id. of Chuck Closing tube		1.417" (36mm)	1.417" (36mm)
	Variable Speed Range		25~2,500min <sup>-1</sup> {rpm}	25~2,500min <sup>-1</sup> {rpm}
	Spindle Motor(Max. Rating)		VAC 10/15HP (7.5/11kW)	VAC 15/20HP (11/15kW)
Tool Slide	Tool Post		Sq. Tool Post	Sq. Tool Post
	Cutting Tool Shank Size		1" (25mm) Sq.	1" (25mm) Sq.
	Tool Hole Dia.		1" (25mm)	1" (25mm)
	Slide Stroke	X-Axis	4" (100mm)	4" (100mm)
		Z-Axis	8" (200mm)	8" (200mm)
	Rapid Traverse Rate	X-Axis	394 IPM (10m/min.)	394 IPM (10m/min.)
		Z-Axis	394 IPM (10m/min.)	394 IPM (10m/min.)
Optional Standard Loader (1-2 Type)	Max. Size of Part(Dia. × Length)		3.15" (80mm) × 1.575" (40mm)	3.15" (80mm) × 1.575" (40mm)
	Min. Size of Part(Dia. × Length)		0.95" (24mm) × 0.35" (9mm)	0.95" (24mm) × 0.35" (9mm)
	Max. weight of Part		0.66Lbs. (0.3 kgf)	0.66Lbs. (0.3 kgf)
	Rapid Traverse Rate		3,150 IPM (80m/min.)	3,150 IPM (80m/min.)
Machine Dimensions	Loading/Unloading Time		3.0sec.	3.0sec.
	Machine Height		78" (1,970mm)	78" (1,970mm)
	Height of Spindle Center		37" (950mm)	37" (950mm)
	Floor Size		64" (1,620mm) × 73" (1,865mm)	64" (1,620mm) × 73" (1,865mm)
	Machine Weight		Apporox. 8,370 Lbs. (3,800kg)	Apporox. 8,490 Lbs. (3,850kg)
Optional Attachments	6" /8" Hydraulic Power Chuck(Solid, Hollow), Pull Type Collet Chuck(Internal, External), Spindle Positioning(1 point), Chip-chute, Chip Conveyor(Spiral Coil Type), Chip Box, Signal Light(1/2/3 tiers), Auto Door, Work Piece Ejecter, Sub-operation Switch(Chucking/Start), Spindle Air Blow, Pneumatic Unit, Door Interlock, Automatic Power ON/Off & Fire Extingisher, Standard Loader(1-2 Type), Gantry Loder, Tool Holders, Set up Charge, etc.			

Note: The specifications are subject to change without notice. Machine in photo may not be exactly same as actual products.

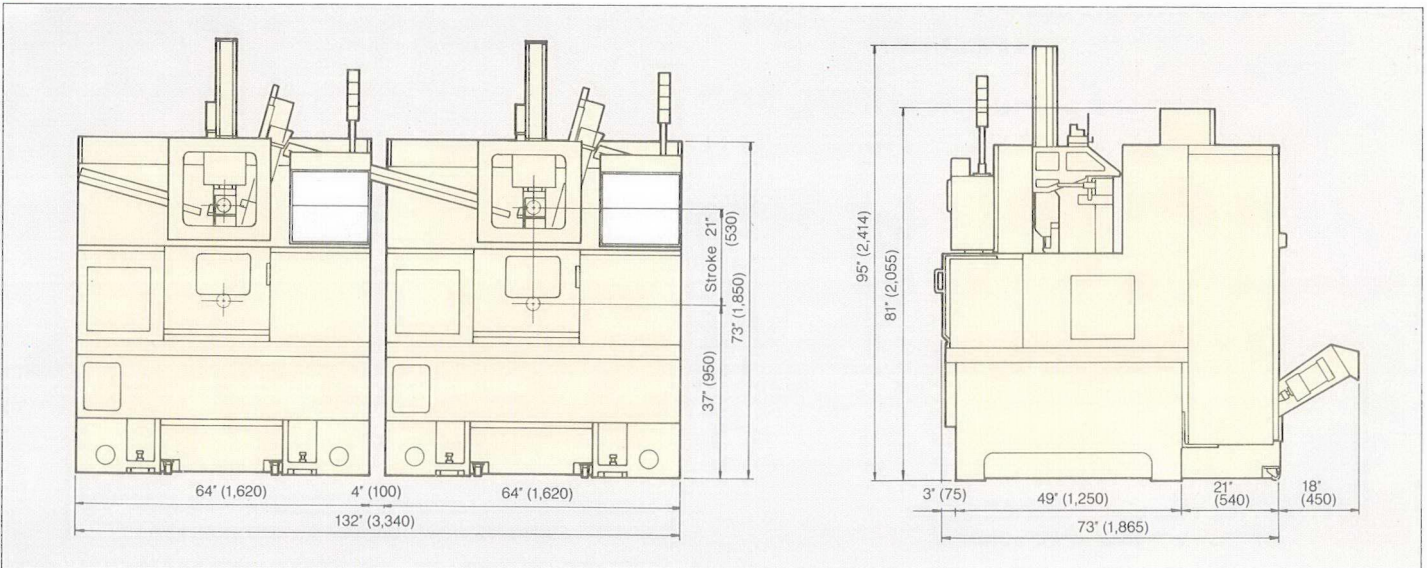
## NC SYSTEM (MIYANO FANUC)

Simultaneous 2 Axes+2 Axes Control (X·Z/X·Z-Axis), 9" Monochrome CRT Display, 66ft/20m Memory Storage, 32 Pairs of Tool Offset, Decimal Input, Canned Cycle (G90, G92, G94),

## NC Options

Tool Nose R Compensation, Additional Part Program Memory (Total 132ft (40m), 264ft (80m)), Multiple Repetitive Canned Cycle (G70 to G76), Direct Drawing Dimension Programing, Spindle Encoder, Chamfering Corner R,

## EXTERNAL VIEW



## MIYANO MACHINERY JAPAN INC.

3-1, Shimorenjaku 7-chome, Mitaka-shi, Tokyo 181, Japan  
Phone: 0422-46-1111 Facsimile: 0422-46-1130

## MIYANO MACHINERY INC.

Headquarters, Production Division:  
940 North Central Ave., Wood Dale, Illinois 60191 U.S.A.  
Phone: (708) 766-4141 Facsimile: (708) 860-7266

## MIYANO MACHINERY EUROPE GMBH.

Feldheider Strasse 62, D-40699 Erkrath, Germany  
Phone: 02104-31067 Facsimile: 02104-35239

## MIYANO MACHINERY ASIA CO., LTD.

Room 9C, Kee Shing Centre, 74 Kimberley Road  
Tsimshatsui, Kowloon, Hong Kong  
Phone: 2314-8128 Facsimile: 2737-2304